

OUTPUT BEAM TETRODE

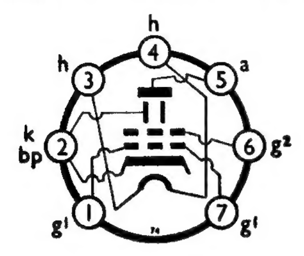
6·3V INDIRECTLY HEATED

N727/6AQ5

NOVEMBER, 1954

The N727/6AQ5 is a commercial equivalent of CV1862.

BASE CONNECTIONS AND VALVE DIMENSIONS



View from underside of base.

Base : B7G

Bulb : Tubular

Overall length :	70·5 max.	mm.
Seated length :	63·5 max.	mm.
Diameter	19 max.	mm.

HEATER

V_h	6·3	V
I_h	0·45	A

MAXIMUM RATINGS (design centre)

Pentode connection

V_a	250	V
V_{g2}	250	V
$V_{h\text{-}k}$	150	V
p_a	12	W
p_{g2}	2	W

Triode connection

V_{a+g2}	250	V
p_{a+g2}	14	W

CHARACTERISTICS

Pentode connection

V_a	180	250	V
V_{g2}	180	250	V
V_{g1}	−8·5	−12·5	V
I_a	29	45	mA
I_{g2}	3	4·5	mA
g_m	3·7	4·1	mA/V
r_a	58	52	kΩ
μ (g1-g2)	10	10	

Triode connection

V_{a+g2}	250	V
V_{g1}	−12·5	V
I_{a+g2}	49·5	mA
g_m	5·0	mA/V
r_a	1·9	kΩ
μ	9·5	

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CAPACITANCES (of cold valve)

c_{in}	8·3	pF	c_{out}	8·2	pF	$c_{a\text{-}g1}$	0·35	pF

TYPICAL OPERATION

Pentode connection

Single valve Class A

V_a	180	250	V
V_{g2}	180	250	V
V_{g1}	−8·5	−12·5	V
I_a	29	45	mA
I_{g2}	3	4·5	mA
v_{in} (pk)	8·5	12·5	V
R_k	270	240	Ω
R_L	5·5	5	kΩ
P_{out}	2	4·5	W
D	8	8	%

Push-pull. Class AB$_1$. Two valves.

Data per pair unless otherwise stated.

	No signal	Max signal	
V_a	250	250	V
V_{g2}	250	250	V
V_{g1}	−15	—	V
I_a	70	79	mA
I_{g2}	5	13	mA
v_{in} (pk) (g_1-g_1)	—	30	V
R_k (per valve)	390	—	Ω
R_L (a-a)	10	10	kΩ
P_{out}	—	10	W
D	—	5	%

GENERAL

The maximum permissible D.C. grid resistance between control grid and cathode is limited to 0·5 MΩ for auto-bias and 0·1 MΩ for fixed bias applications.

MOUNTING

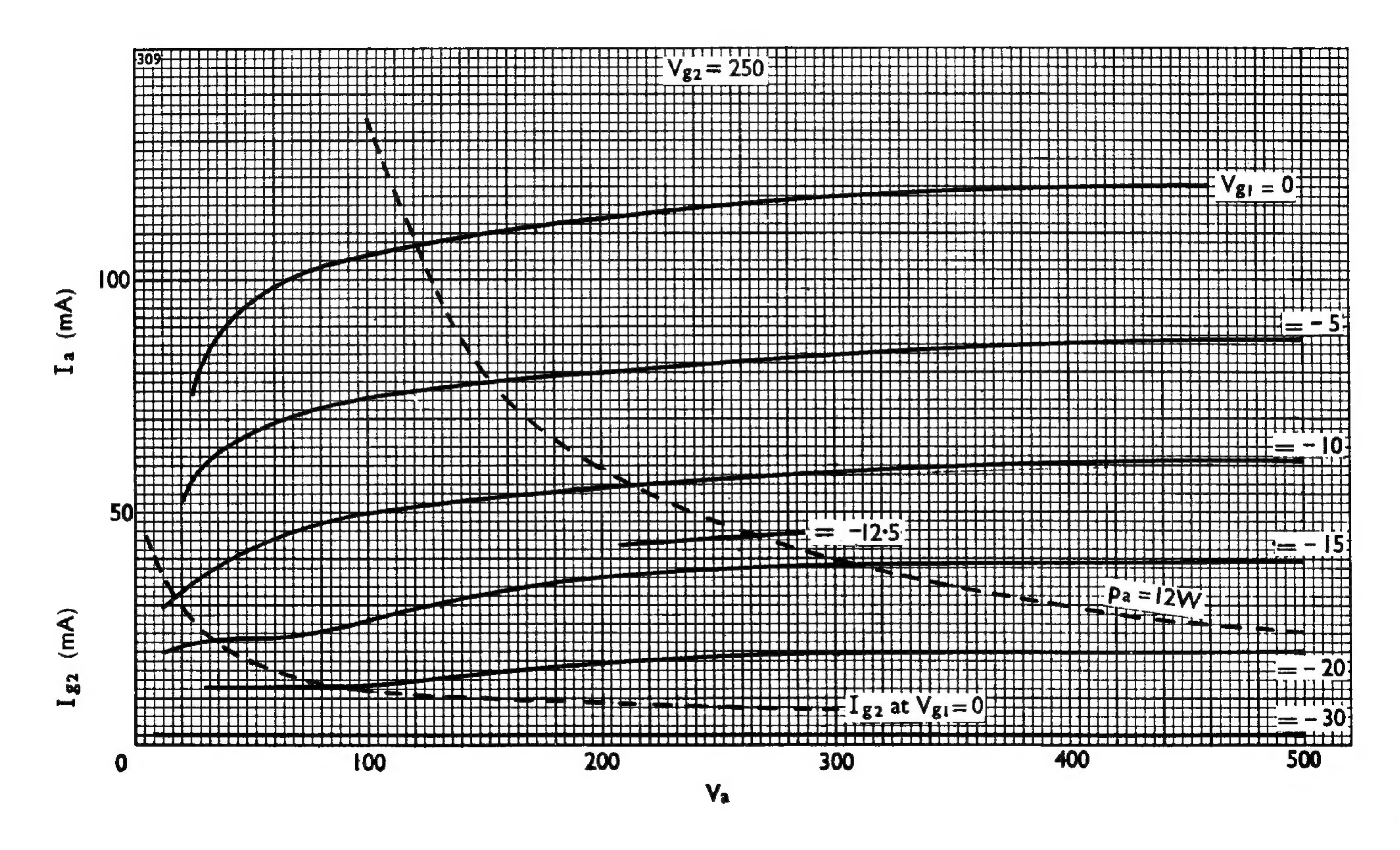
Any position.

RETAINING

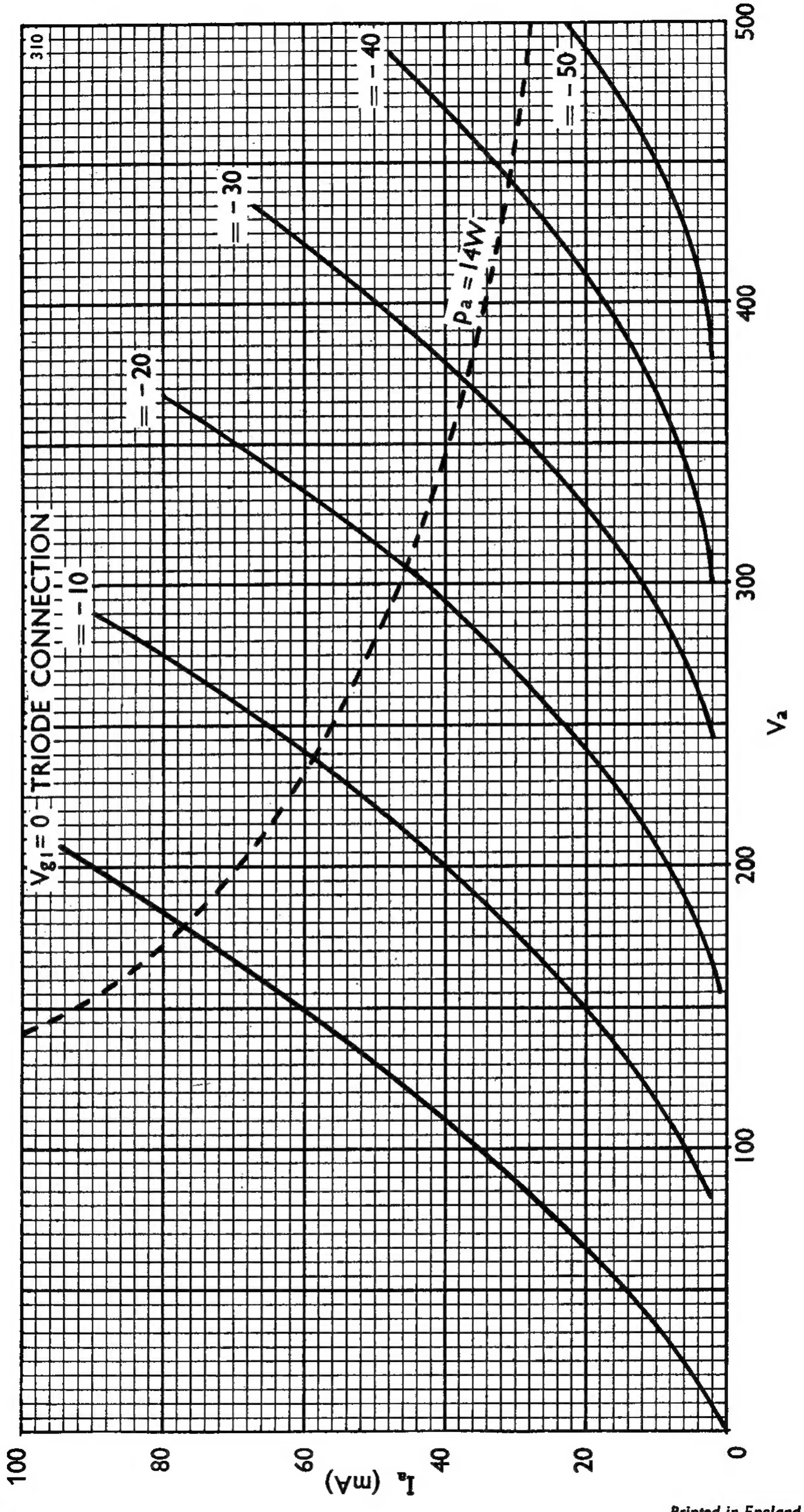
It is recommended that a retaining device is used.

VENTILATION

Free air circulation around the bulb is preferable. The temperature of the hottest part of the bulb must not exceed 250°C.


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$V_{g2} = 250$
$V_{g1} = 0$
= −5
= −10
= −12·5
= −15
$p_a = 12W$
= −20
I_{g2} at $V_{g1} = 0$
= −30
I_a (mA)
I_{g2} (mA)
100
50
0
100
200
300
400
500
V_a

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Printed in England. C.